REPORT

OF

THE TENTH ANNIVERSARY

OF THE

MICROSCOPICAL SOCIETY

OF

LONDON;

HELD AT

THE SOCIETY'S ROOMS, No. 21, REGENT STREET,

FEBRUARY 13TH, 1850.

LONDON:

PRINTED BY E. NEWMAN, DEVONSHIRE STREET, BISHOPSGATE.

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OFFICERS FOR THE YEAR 1850.

PRESIDENT.

DR. ARTHUR FARRE.

TREASURER.

N. B. WARD, ESQ.

SECRETARY.

J. QUEKETT, ESQ.

ASSISTANT-SECRETARY.

MR. J. WILLIAMS.

COUNCIL.

DR. CARPENTER.	M. MARSHALL, ESQ.
HENRY DEANE, ESQ.	JULIUS PAGE, ESQ.
W. DE LA RUE, ESQ.	ALFRED ROSLING, ESQ.
ARTHUR HENFREY, ESQ.	GEO. SHADBOLT, ESQ.
GEORGE JACKSON, ESQ.	J. B. SIMONDS, ESQ.
M. S. LEGG, ESQ.	ROBERT WARINGTON, ESQ.

And also the following gentlemen, who have served the office of President. (See the law passed at the Annual General Meeting, February 13th, 1850; page 22 of this Report).

RICHARD OWEN, ESQ.	THOMAS BELL, ESQ.
JOHN LINDLEY, ESQ.	J. S. BOWERBANK, ESQ.

GEORGE BUSK, ESQ.

REPORT.

THE Microscopical Society of London held their Tenth Annual Meeting, February 13th, 1850:

GEORGE BUSK, Esq., President, in the Chair.

When the following Reports were read.

REPORT OF COUNCIL.

According to annual custom, the Council have to make the following Report on the state and progress of the Society during the past year.

The number of members in the last published list, viz., that for 1849, was — Ordinary Members, 137; Associates and Honorary Members, 4; giving a total of 141: since that time there have been elected 16; making a total of 157: this number must, however, be reduced by 4, viz. 3 deceased and 1 resigned; making a final total of 153: being an increase of 12 upon the number in the published list of last year.

The rooms have been opened on Wednesdays during the session, under the usual regulations. The cabinet

of objects now contains 394 specimens, being an increase of 102 since the last Report; and 6 works have been presented to the Society since the last Anniversary, making the total number of volumes in the library 76. There are also in the possession of the Society various drawings and diagrams, relating chiefly to papers read at the meetings of the Society, together with copies of the several parts of the Transactions. The Council have also to notice that arrangements have been made for facilitating the mutual exchange of objects among the members, which are found to be attended with considerable benefit, not only to those making such exchanges, but also to the Society itself.

It may also be stated, that the privilege enjoyed by members of making use of the Society's instruments, &c., on the Wednesday, has been much more frequently employed than heretofore.

REPORT OF AUDITORS.

We have examined the Treasurer's Account for the past year, with the vouchers, and find the balance to be £68 8*s.* 6*d.*, of which £63 15*s.* are with the Bankers, and £4 13*s.* 6*d.* in the Treasurer's hands. The receipts and payments have been as follows.

JOS. J. LISTER,
JOSEPH GRATTON, } AUDITORS.

February 6th, 1850.

RECEIPTS. From February 7th, 1849, to February 7th, 1850. PAYMENTS.

	£	s.	d.	£	s.	d.
Balance from the previous year				108	16	9
For Entrance of Members	13	13	0			
Composition of do.	11	11	0			
Annual Payments:—						
For 1847	1	1	0			
For 1848	2	2	0			
For 1849	40	19	0			
For 1850	55	13	0			
Nineteen Copies of Transactions sold, deducting Commission and Advertising ...	4	12	0			
Two dividends on £162 12s. 11d. 3 per cent. consols, to January, 1850	4	17	6			
				134	8	6
				£243	5	3

	£	s.	d.
Rent of Room, one year	20	0	0
Salary of Curator, one year	30	0	0
Ditto of Assistant-Secretary, one year	21	0	0
Attendance at Meetings, Gas, Oil and Firing	11	6	10
Refreshments, &c., at Soirée	12	13	6
Stationery, Postage, Carriage, &c.	5	17	4
Printing Transactions, &c.	47	1	6
Lithographing, Drawings, &c.	8	14	9
Implements	„	9	0
Commission to Collector	6	2	10
	163	5	9
Purchase of £11 18s. 8d. consols, the amount of a member's composition	11	11	0
Balance in hand	68	8	6
	£243	5	3

The President then addressed the Meeting as follows.

Gentlemen,

On this the Tenth Anniversary of the foundation of the Microscopical Society, I have, for the second time, the pleasure of congratulating you upon its continued, or even increased, prosperity. Our number has been diminished by not more than four, and, on the other hand, has been increased by the addition, during the past year, of not less than sixteen new members; a satisfactory proof of the progressive favour in which microscopical research continues to be held, and of the light in which the objects and endeavours of this Society are viewed by the scientific world.

I am sorry to state that three of the four members, whose loss I have mentioned, have been removed from amongst us by the hand of death. They are W. E. Few, Esq.; F. Dixon, Esq., a surgeon residing at Worthing, and eminent as a geological collector, and as the author of a work of some value on the 'Geology and Antiquities of Sussex:' the third is T. Low Wheeler, Esq., many years Chairman of the Court of Examiners of Apothecaries' Hall.

It is not without some feeling of regret that I have to observe that our annual volume of Transactions has not

yet made its appearance, and that its size will not perhaps be commensurate with what ought to be expected from the zeal and activity of such a considerable number of observers as now constitute the Microscopical Society. This, perhaps, arises not so much from relaxed zeal in the pursuit of knowledge, in such members as might be best expected to swell the size and add value to the contents of our Transactions, but to the circumstance that other channels have been deemed either more convenient, more ready, or more fitted for their communications. In this view it would, in my opinion, be highly desirable to ascertain whether greater promptitude in the publication of observations, with their accompanying illustrations, might not be conducive to the furtherance of one great object of this Society, viz., the publication in its Transactions of useful observations, of any kind and in any department of natural knowledge dependent upon the use of the microscope. At a time like the present, when the increased number of observers, all furnished with instruments of nearly equal worth, and all zealous in observing, it is an object—and a proper object—of ambition, but one not always very easy of attainment, to secure one's claim to originality of observation. This can be effected most readily and most indisputably by prompt and early publication; and I think there can be little doubt that greater promptitude in bringing out the results of the observations of our members, in conjunction with the admirable way in which our Transactions have hitherto undeniably been got up, would induce the members of this Society to prefer the pages of our volume as the vehicle for such scattered observations, at all events, as do not belong to any special object of research: though even in such, when it is considered that no expense or trouble is spared in the illustration of papers published by us, it appears to me that there are fewer more

convenient or fitting channels for the communication of microscopical observations, than that presented in the pages of the Microscopical Transactions. I have said perhaps too much on this subject; but it is one upon which—having the continued welfare and value of the Microsopical Society at heart—I feel strongly, satisfied as I am that the worth of the Society in the public eye must depend in great measure upon the value of the Transactions published by it. I do not deny that there are many other, and worthy objects too, aimed at by our Association. Our meetings and discussions, the exhibition of objects, and the pleasing interchange of thoughts and observations these meetings afford, are all useful, agreeable, and instructive; but in the eyes of the world at large we shall be judged of by our published works: and it is therefore to uphold the high character of our Society that I have brought this matter of its Transactions so prominently before you.

Our library has received the addition of eight new works during the past year, and our cabinet, under the late regulation as to the interchange of specimens, recently brought into action, promises, I hope, to become one worthy of the Microscopical Society of London. I am happy to say that this system of exchange has already added sixty microscopical slides to our cabinet: thirteen more have been presented by Dr. A. Ochatz, and several others by members; making our present number of specimens about 370 or 380. The printing of the list of works in the library, and of microscopical objects and drawings in the cabinet, in the last annual Report, has occasioned—I am informed by Mr. Leonard—a much more frequent inquiry for them; and the visits of members on the Wednesday have been much more frequent,—so that Mr. Leonard's time has been a good deal occupied in that way.

During the past year nine papers have been read at our

ordinary meetings. Of these communications it is to be observed, and perhaps with regret, that none have had reference to any improvement in the microscope itself, or in the appurtenances to microscopical research, a subject upon which hitherto we have not wanted observations, and which should always be borne in mind as one particularly within the scope of this Society. Oral communications on these matters have undoubtedly been made, but we ought to have something more tangible and permanently useful.

Of the nine papers, seven, or I may say eight, have had reference to Zoology or Animal Physiology, and the other to Botany.

The first in point of time of these papers contained some "Observations on the Anatomy of a Species of Thaumantias," which I had the honour to lay before you. This paper was intended to describe certain points in the anatomy of a species of naked-eyed Medusa, which appeared to me not to have been sufficiently noticed previously. In it I have described the structure of the disk, showing that the sub-umbrella is chiefly, if not wholly, composed of a muscular expansion, as is also the velum or marginal valve, and that the muscular fibres constituting these expansions are distinctly marked with transverse striæ; a fact that had been previously pointed out in another species of Medusa, but which appeared to have been overlooked or disbelieved by later observers. The apparent mode of connexion, also, between the gastro-vascular canals and the reproductive glands, was indicated; as well as the structure and connexions of the tentacular bulbs and tentacles. I also referred to the peculiar structure of the marginal bodies, and ventured to surmise, from certain considerations, that these bodies were most probably visual, and not auditory organs, as commonly supposed.

The next paper was one by Mr. Shadbolt, being the

"Description of a new form of Hair from a Species of Tarantula," specimens of which were at the same time exhibited. It was stated that the creature is entirely covered with short hairs, of a dark brown colour, excepting on the abdomen, where they are of a dark red, and among them are longer hairs of a light brown colour. The dark brown hairs, and also the longer ones from the thorax, present the appearance of a central shaft, with numerous small hairlets, and presenting very much the appearance of a mouse's tail. The hairs, however, from the dorsal part of the abdomen are the most remarkable and curious, being extremely complex in their structure, and more like feathers than hairs: they consist of a central shaft, furnished with appendages and flattened lateral blades, those towards the base of the hair pointing towards the apex; and these blades are succeeded by obtuse projections inclining towards the base of the hair, which projections are again succeeded by six flattened blades similar to the former, but pointing in the opposite direction or towards the base of the hair.

On the same evening a paper was read by Mr. Quekett, "On a peculiar form of Elastic Tissue found in the Ligamentum nuchæ of the Giraffe." In this animal the length of the ligament was 6 feet 2 inches, and its weight nearly 9 lbs.; and as a proof of its great elasticity, it was stated that immediately on its separation from one of its attachments it contracted to 4 feet, or became shortened rather more than one-third of its length. On microscopic examination, the individual fibres presented the usual curled extremities so characteristic of elastic tissue, but besides this they presented transverse markings or striæ. The diameter of the largest fibres was about the $\frac{1}{500}$th of an inch, while others occurred as small as the $\frac{1}{2000}$th. The striæ

were generally placed at equal distances, and were of equal breadth, being on an average as far apart as the fibre was wide. The structure appeared to Mr. Quekett to be something intermediate between elastic tissue and muscular fibre.

The next paper was also by Mr. Quekett, and entitled "On the Structure of Cartilage in the four great Classes of Animals," being the second contribution by the same indefatigable observer on the same subject. The former paper described the principal characters of cartilage in general. The present paper went on to notice the most simple form in which that anatomical element exists, viz., that of large more or less hexagonal, nucleated cells, admitting of easy isolation from each other; and such as constitute the chorda dorsalis of many fishes, both in the adult and in the embryonic condition. The membraniform condition of cartilage was next described, as it exists in the ears of many animals. In this form the cells are generally well-defined, and collected together in a single thin layer, as in the bat; and sometimes into two or more layers, as in the mouse and rat. The different modes of arrangement of the cells in osseous fishes, and the mode in which they become ossified, were then described.

To our excellent Secretary—the Atlas of the Society—we are indebted for the next paper also, descriptive of the development of the trout, or rather "On the Structure and Mode of Growth of certain Tissues and Organs of the Trout, as observed in specimens produced by the Artificial Mode of Hatching the Ova, proposed by M. Boccius and practised by Samuel Gurney, Jun., Esq.," and to whose liberality many members of the Society have been indebted for interesting specimens of the fish in its embryo state. Mr. Quekett's paper referred principally to the growth or

development from the period of exclusion or extrication from a previously excluded ovum, to maturity, and was illustrated by numerous excellent figures.

The next paper is by Mr. Leonard, "On the Growth of Grass." Having previously noticed the extreme rapidity with which grass grows,—on one occasion as much as an inch and a half in twenty-four hours,—Mr. Leonard was induced to suppose that it might be possible to *see* it grow under the microscope. He therefore took some common meadow grass (*Poa annua*), and, having manured it, he found it grew at the rate of an inch or more in twenty-four hours. A young stem with its root being placed in a test-tube, Mr. Leonard was fortunate enough actually to witness the growth of the blade, or rather the upward movement of the apex. On the first experiment this movement appeared to be effected in starts, but on readjusting the apparatus the motion became continuous, or gradual and equable. The field of the microscope included rather more than the $\frac{1}{100}$th of an inch, and the apex of the grass traversed it in less than ten minutes. In reference to the mode of growth of this part of the plant, he stated his opinion to be that a gradual expansion and elongation of the cells takes place, and that there might also be an addition of cells produced near the root, which cells may be gradually developed and matured in the stem during the growth of that part.

We are next obliged to Mr. Shadbolt for "Some Observations on the Structure of the siliceous Loricæ of the genus Arachnoidiscus." He expressed an opinion that these shells are not strictly bivalves, although something like such, but, more properly speaking, multivalves, each shell consisting of two circular discoid portions and two annular valves, exactly similar respectively to each other. Each of the discoid valves is also capable of further sepa-

ration into two circular but dissimilar portions, but this separation is exceedingly difficult to accomplish. The disks are composed, first, of a very thin membrane, and secondly, of a siliceous frame-work, well adapted to strengthen and support the former. Mr. Shadbolt also described a mode of manipulation under the microscope, in which these objects are viewed as opaque objects, and by which much assistance is gained in demonstrating the true structure. His description was illustrated by accurate drawings.

Our friend Mr. Varley has furnished us with microscopical observations "On a Malady incident to House-flies," and illustrated in his usual graphic manner. Mr. Varley had often noticed the death of flies in a peculiar manner, and their adherence to the glass of windows, by the growth of a species of fungus or mould. He was led to regard this growth as the cause of the flies' decease, and proceeded to describe the mode of increase and development of the plant, which was extremely rapid. This vegetation, judging from Mr. Varley's descriptions and drawings, appears to have been *Achlya prolifera*, a well-known parasite upon dead or dying animal tissues, and if so, its growth is probably not the cause, but the consequence of the flies' death.

The concluding paper of this year is one of considerable interest and value: it is on the "Architectural Instincts of Melicerta ringens, an Animal of the class Rotifera;" by P. H. Gosse, Esq. After noticing that this animal had been mentioned and imperfectly described by the illustrious Leeuwenhoek,* Mr. Gosse described the appearance of the animalcule as being that of a tube of a dark yellowish or reddish brown hue, composed of a multitude of

* Opera, vol. v. p. 63.

round pellets, set very regularly, and apparently agglutinated by a cement insoluble in water. This tube is found affixed to the roots of *Lemna*, or the narrow leaves of *Chara*, &c. Out of this tube protrudes an animalcule, exhibiting, when fully expanded, a short stem, carrying two large, petaloid disks, set round with cilia, and two smaller leaflets opposite to the former, and also ciliated, thus giving the animal the appearance of flowers with four unequal petals. The most remarkable anatomical feature, however, is a round, cup-shaped cavity, situated below the ciliated lobes, on the ventral aspect, and within the margin of which a rapid rotatory, ciliary motion goes on. Upon adding some carmine to the water containing the animalcule the particles were seen to run in a constant stream through one of the divisions of the petals, and proceeding round a part of the body of the animal, were deposited in the little cup-shaped cavity, where they were whirled about with great rapidity, and formed into a kind of pellet. The creature was seen to bend itself forward, deposit the pellet on the edge of the tube, and proceed to refill the now empty cup with another mass of particles of carmine, which was moulded into a pellet and deposited in the same manner as before. This cup-shaped organ was thus definitively ascertained to be formed expressly for the agglomeration of the pellets of which the tube is constructed; and, consequently, Ehrenberg was incorrect in supposing these substances to be the excrement of the animal. This was confirmed subsequently by the discovery that the anal aperture was situated on the side opposite to that on which the circular disk is placed, and lower down. Mr. Gosse's observations agree, therefore, much more nearly with those of Leeuwenhoek than with those of Ehrenberg.

Besides these papers, which have been read at the Meetings of the Society, I took occasion on one evening when we had no paper before us, to offer some remarks upon what has been or is denominated the fungoid theory of cholera—a theory which may perhaps now be regarded as dead and gone, but which at one time had excited no little interest, and deservedly so, in the medical world. It arose from the supposed fact that certain bodies, now, it is well known, of various kinds, but at first considered as one and the same in different stages of development, had been discovered, and were presumed to be peculiar to the evacuations of cholera patients. This theory was at one time pretty generally received in a favourable light, and its authors certainly deserve the greatest credit for the cautious manner in which they brought out the results of their most careful and industrious researches. The greatest credit, also, is due to them for their undaunted zeal and praiseworthy efforts to elucidate the obscure pathology of cholera. As these observations had been made public only towards the end of the epidemic in this part of the kingdom, I had not many opportunities of verifying or confuting them. But the observations I had an opportunity of making satisfied me that the various bodies in question were not, in the first place, peculiar to cholera discharges, and secondly, that they could, or those of them I met with, be traced in some way to the ingesta, either food or medicine. I need not here enter into details, but will merely observe that this opinion, there is every reason to believe, is the correct one, as all the so-termed cholera bodies have now been traced, if not with certainty, yet with sufficient probability, to their true sources.

Although I have not here to record any communications to the Microscopical Society on the subject of the instru-

ment itself, I think that this is a proper occasion shortly to refer to what progress has been made in it or its appliances since our last anniversary. I would in the first place observe that the demand for microscopes and of the best class has, in the last year, by the concurrent testimony of our three makers, continued to increase. This fact must be highly gratifying to us all, as showing the increasing popularity of our favourite instrument of research, and as justifying the expectation that when so large an amount of seed is sown, an abundant harvest is to be looked for. I have not to report any marked improvement in that main part of the instrument the object-glasses, and am induced to believe, though almost loth to express the belief, that the limit of perfection in that direction is nearly, if not quite attained. As I hinted last year in the Annual Report, great and increasing attention has continued to be paid to the mode of illumination of objects, and with very satisfactory results. The first, and perhaps the most important of the contrivances lately brought forward for this purpose, is that of Mr. Gillett, just completed, and I believe produced here this evening by Mr. Ross. I have not had an opportunity of witnessing the effect of this condenser, but am informed by Mr. Ross that from its great and convenient adaptability in extent of aperture and in the degree of intensity of light, it will be found of the utmost service in the investigation of tissues, where penetration is above all things required. Mr. Powell has also contrived a chromatic condenser, consisting of two plano-convex lenses, so arranged as to be equivalent to a lens of $\frac{1}{4}$ of an inch focus. By this contrivance, by which some obliquity or eccentricity may be given to the pencil of light, a considerable facility is gained for the examination of lined objects more particularly. For a third and very ingenious mode of illuminating transparent objects by means of a pencil of ob-

lique light, we are indebted, I believe, to the ingenuity of an excellent Parisian optician, M. Nâchet. This instrument consists of two prisms of glass, and has a lenticular surface at one extremity. These parts are so arranged that the light is transmitted through the lens at the end of the prism at various angles, according to the inclination of the surfaces of the prism from which it is reflected, and the angles for which these prisms have been made, are 30°, 35°, 40°. The first of these will probably be found the most useful. This illuminating prism can be mounted as suggested by Mr. W. De la Rue, so as to admit of rotation on its axis, and consequently so as to throw the illuminating pencil of light upon any side of the object, without moving either the latter or the source of illumination. The purpose of Mr. Legge's ingenious stage would therefore, as far as transparent objects are concerned, be effected by this simple contrivance. A mode of illuminating opaque objects, when viewed by high powers, such as the $\frac{1}{8}$th or $\frac{1}{12}$th, has been a desideratum. This want has to a certain extent been supplied, or at least the way in which its supply is to be sought has been indicated by an invention of Mr. Anthony, of Caius College, Cambridge. His manner is to collect and condense the light with a pair of large lenses, having the ratio of their foci similar to Herschel's doublet, and consisting of a meniscus of about three inches diameter, and a crossed lens of still larger size, and the rays from these are received on a common bull's-eye, which still farther concentrates them on the object. One difficulty connected with the illumination of objects in this way would appear to arise from the great obliquity with which the light must necessarily strike the object when it has to pass in the narrow space under the $\frac{1}{12}$th object-glass. Notwithstanding this, however, Mr. De la Rue informs me that he has seen the markings on *Navicula*

angulata brought out in great perfection under Mr. Anthony's mode of illumination.

I have this evening, through the kindness of Mr. De la Rue, had an opportunity of learning that Mr. Kingsley, also of Cambridge, has succeeded in producing a condenser in the form of a lens having a very short focal length and a very large aperture, by means of which the markings on the various species of *Navicula*, usually considered as of the highest class of test-objects, are brought out with what may almost be termed marvellous facility and clearness. It is obvious that to use such a condenser to its greatest advantage the object-glasses must also have the greatest possible aperture. To this important element, therefore, in the object-glass, the attention of opticians must still continue to be most assiduously turned.

With respect to microscopical appliances I would again refer to the extraordinary efforts in glass ruling, of M. Nobert, to which reference was made last year. He has now, I understand, almost exceeded belief in the fineness of his workmanship. He has, or conceives he has, ruled lines the $\frac{1}{120000}$th of an inch apart, or ten thousand in a Paris line. I fear no optical powers will ever be produced capable of resolving such lines as these. It will be gratifying to our friends the opticians to learn that M. Nobert, who is doubtless well able to judge, is decidedly of opinion that the English object-glasses, estimating them, I presume, from their performance upon his tests, are superior to any made on the continent.

I may mention also that M. Nâchet has made a new form of camera lucida, which I am informed has some advantages, among which is the circumstance, that owing to its having one surface of reflection less, an increase of light is gained, that the pencil can be seen more readily, and thirdly, that the prism can, or in fact must, be used with

the body of the instrument at the convenient angle of 60° instead of horizontal. But like the steel disk, this prism has, in my eyes, the trifling disadvantage of inverting the image of the object, so that it appears reversed when you look into the microscope.

At the end of this, the second year of my tenure of this chair, to which your kindness called me, and my occupation of which has been rendered so agreeable by your continued consideration, I have to reiterate my thanks to you for that kindness and consideration, and to assure you that I shall ever look back to the two years I have so unworthily presided over your meetings, with the greatest pride. I am happy also in being succeeded by one who, like my friend Dr. Farre, has been so long distinguished in the walks of science, and who, from the first, has so amply proved himself the zealous friend of the Microscopical Society and of Microscopy. Under his auspices, and of many of his successors too, may the Society continue worthily to flourish.

The following resolution, which was proposed by Mr. Warington and seconded by Mr. Marshall, was carried unanimously: "That those Members who have served the office of President shall be Members of Council, in addition to the twelve provided by the present laws."

Proposed by Mr. Blenkins, seconded by Mr. Marshall, and carried unanimously, That the Reports of the Council and Auditors be received, and that they and the President's Address be printed and circulated in the usual manner.

The Law relating to the Election of Officers was then read; and the Society proceeded to ballot for the Officers and four new Members of Council for the year ensuing.

The Ballot having been taken, the following were declared elected.

OFFICERS.

PRESIDENT.—DR. ARTHUR FARRE.

TREASURER.—N. B. WARD, ESQ.

SECRETARY.—JOHN QUEKETT, ESQ.

ASSISTANT-SECRETARY.—MR. JOHN WILLIAMS.

NEW MEMBERS OF COUNCIL.

DR. CARPENTER.

WARREN DE LA RUE, ESQ.

ARTHUR HENFREY, ESQ.

S. B. SIMONDS, ESQ.

In the room of

GEORGE BUSK, ESQ.

(who is a Member of Council in accordance with the law to that effect passed at this Meeting).

J. S. BOWERBANK, ESQ.

DR. LANKESTER.

CHARLES WOODWARD, ESQ.

Who retire from the Council.

Proposed by Dr. Lee, seconded by Mr. Ince, and resolved unanimously, That the thanks of the Meeting be given to the President, Treasurer, Secretary, and Members of Council, for their services on behalf of the Society during the past year.

LIST OF MEMBERS.

---

* Allcard, John, Esq., F.L.S., Stratford-green

* Allcard, Edward, Esq., Myddelton-square, Pentonville

* Aldous, Lens, Esq., 2, Thornhill Bridge-place, King's Cross

* Amesbury, Joseph, Esq., Fitzroy-square

* Ansell, T., Esq., F.L.S., Harley-place, Bow, Middlesex

Ansted, D. T., Esq., F.R.S., &c., Professor of Geology, King's College, and 36, Gloucester-road, Hyde-park

Avery, John, Esq., 3, Queen-street, May-fair

* Bagster, J., Esq., 15, Paternoster-row

Bagshaw, Robert John, Esq., 9, York-place, Portman-square

Bailey, Prof. J. W. (Hon.), West Point, New York

Bainbridge, Josh., Esq., 21, Hyde-park-gardens.

Barber, F., Esq., Camberwell

Bartlett, Wm., Esq., 19, Terrace, Notting-hill

* Bean, Rev. J. P., St. Paul's School

* Beck, Richard L., Esq., 5, Tokenhouse-yard

* Bell, Thos., Esq., F.R.S., L.S., G.S., Z.S., &c., Prof. Zoology, King's College, 17, New Broad-street

Bell, Fredk. John, Esq., F.G.S., Malden, Essex

* Billing, Archibald, M.D., Grosvenor-gate, Park-lane

* Birkett, John, Esq., F.L.S., Wellington-street, London Bridge
* Bland, E. L., Esq., Anchor-terrace, Southwark

Blenkins, G., Esq., Surgeon, Grenadier Guards, and Lecturer on Anatomy at St. George's School of Medicine, 14, Whitehead's-grove, Chelsea

Boddy, W. T., Esq., 31, Albion-street, Hyde-park

* Bowerbank, Jas. Scott, Esq., F.R.S., L.S., R.A.S., G.S., Z.S., 3, Highbury-grove, Islington

Boyle, W. A., Esq., Granville-square

Brown, Fredk., Esq., 98, Warwick-street, Belgrave-road

Brown, Rev. J. L., 4, Blandford-place, Regent's-park

* Busk, George, Esq., F.L.S., Greenwich

Button, Charles, Esq., 146, Holborn-bars

Carpenter, Dr., 6, Regent's Park-terrace, Gloucester-gate

Cobb, F., M.D., St. Helen's-place, Bishopsgate-street

Coventry, Thos., Esq., 5, Old-square, Lincoln's Inn

* Dalrymple, John, Esq., F.R.S., Grosvenor-street
* Darker, W. H., Esq., 9, Paradise-street, Lambeth

Davis, Richard, Esq., F.L.S., Z.S., 9, St. Helen's-place, Bishopsgate-street

* Deane, Henry, Esq., Clapham-common

De la Rue, Warren, Esq., F.C.S., 110, Bunhill-row

Delferrier, Wm., Esq., 40, Sloane-square

Dinsdale, Capt., Newsham-park, Durham

Downe, Rt. Hon. Viscount, F.L.S., Bookham-grove, Surrey

* Eyles, R. S., Esq., St. Andrew's-court, Holborn

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Assistant-Secretary,
MR. JOHN WILLIAMS,
Royal Astronomical Society, Somerset House.

February, 1850.

List of Books added since last year's Report.

Mittheilungen der Naturforschenden Gesellschaft in Zurich. Heft 2. (No. 14—26).

Meteorologische Beobachtungen angestellt auf Veranstaltung der Naturforschenden Gesellschaft in Zurich. 1837—1846.

Ditto. Januar bis Dezember, 1848.

Denkschrift zur feier des hundertjährigen Stiftungfestes der Naturforschenden Gesellchaft in Zurich, a m 30 November, 1846.

All presented by the several authors or publishers.

Smithsonian Contributions to Knowledge. Vol. i. Presented by the Smithsonian Society.

Reports of the Smithsonian Institution, containing plans, operations, &c., to January 1, 1849. Presented by the Smithsonian Society.

A Descriptive Account of Fresh-water Sponges in the Island of Bombay, &c. H. J. Carter, Esq., Assistant-Surgeon, Bombay Establishment.

Transactions of the Tyneside Naturalists' Field Club. Vol. i. Part 4. Presented by the Club.

Proceedings of the Literary and Philosophical Society of Liverpool. No. 5. 1849.

Quarterly Journal of the Geological Society, for February, May, August and November, 1849.

The Zoologist. January to December, 1849. Presented by Mr. Newman.

List of Drawings presented since the last Report.

Drawing of Hair from the Tarantula Spider, magnified 600 diameters. S. W. Leonard.

12 Pencil-drawings of Turris neglecta. G. Busk.

16 do. Thaumantias. G. Busk.

List of Microscopic Objects presented since the last Report.

12 Specimens of Parasites. W. H. Ince.

1 Electrotype, Copper. M. S. Legg.

2 Tarantula Spider (Hairs). G. Shadbolt.

66 Duplicate Specimens, as per Exchange-book, namely, Entire Animal, 1; Cuticular Appendages, 8; Desmidieæ and other Algæ, 10; Vegetable Tissues and portions of Vegetables, 10; Sections of hard and soft Tissues (animal and vegetable), and Minerals, 7; Infusoria (recent and fossil), Diatomata, Phytolithraria, &c., 9; Polythalamia and Calcareous Remains, 1; Spicules and Gemmules of Sponges, Gorgonia, Alcyonia, &c., 6; Polypidoms of Zoophytes, &c., 9; Crystals and Chemical Preparations, 5.

12 Slides, presented by Dr. Oschatz. No. 1. Infusorienerde Eger. No. 3. Acarus Siro. No. 4. Chironomus nanus. No. 5. Chironomus nanus (Caput). No. 6. Melolontha vulgaris (Lamina et Antennæ), Nos. 2, 7, 8, 9, 10. Specimens of Manufactured Silk, Wool, &c. No. 11. Pteris serrulata (Sporangia et Sporæ). No. 12. Clematis vitalba (Ramus).